answers that have been given to the great ontological problem "What am I?":—

"In this search for information about myself from eminent thinkers of different types, I seem to have learnt one lesson, that all science and philosophy, and every form of human speech, is about objects capable of being perceived by the speaker and the hearer; and that when our thought pretends to deal with the Subject, it is really only dealing with an Object under a false name. The only proposition about the subject, namely, 'I am,' cannot be used in the same sense by any two of us, and, therefore, it can never become science at all."

Prof. Campbell has succeeded in presenting to us a most vivid picture of Maxwell's character. The view which he gives will be fresh, and partly strange, to many even of those who knew Maxwell well. It is no reproach to him to say that, in our opinion, he has by no means exhausted the different aspects of his subject. So many-sided was Maxwell's character, that it would have required the united efforts of several biographers to do it the fullest justice.

In the second part of the book will be found a good account by Mr. Garnett, of Maxwell's scientific work. Of this nothing further need be said, for an excellent summary has already been given in the pages of NATURE by Prof. Tait (vol. xxi. p. 317).

It may be questioned whether the literary merit of many of the pieces of occasional poetry in the third part will be sufficient to secure for them the interest of the general reader; but many will greet with pleasure the reappearance of old friends among the serio-comic verses. We are glad to find among them our favourite, "To the Committee of the Cayley Portrait Fund"; finer compliment to a mathematician surely never was penned. Among those hitherto unpublished may be mentioned the Paradoxical Ode to Hermann Stoffkraft, beginning as follows:—

My soul's an amphicheiral knot,
Upon a liquid vortex wrought
By Intellect, in the Unseen residing.
And thine doth like a convict sit,
With marlinspike untwisting it,
Only to find its knottiness abiding;
Since all the tools for its untying
In four-dimensioned space are lying,
Wherein thy fancy intersperses
Long avenues of universes,
While Klein and Clifford fill the void
With one finite, unbounded homaloid,[1]
And think the Infinite is now at last destroyed.

We ought to mention in conclusion that the book is beautifully illustrated; there are vignettes of Maxwell and of his father and mother; some quaint and suggestive illustrations of scenes from his early life, after originals by Mrs. Blackburn; and a variety of diagrams, several of them beautifully coloured, reproduced from originals—by Maxwell's own hand—in illustration of his researches on light and colour. G. C.

OUR BOOK SHELF

Description Physique de la République Argentine d'après des Observations Personelles et Étrangères. Par le Dr. H. Burmeister. (Buenos Ayres, 1876-82.)

SOME account of the progress of this extensive work, in which the veteran naturalist, Dr. H. Burmeister, formerly of Halle, proposes to give a complete physical history of his adopted country, may not be unacceptable. Of the octavo text, which is accompanied by folio atlases, in order to give the illustrations on a large scale, we have seen four volumes, numbered 1, 2, 3, and 5. The fourth volume, which we suppose will contain the birds, is not yet issued, and the atlases in some cases do not appear to be complete.

The first volume (issued in 1876) is devoted to the history of the discovery and general geographical features of the Argentine Republic; and the second, published in the same year, to its climate and geological conformation. The third volume, of which the text was issued in 1879, has been already noticed in our columns (NATURE, vol. xxiv. p. 209). It contains an account of the Mammal-fauna both recent and extinct. We have now just received the first *livraison* of the folio atlas to this volume, containing a series of plates illustrating the whales of the Argentine coasts, a subject to which Dr. Burmeister has devoted special attention for many years. Of the fifth volume, devoted to the Lepidoptera of Buenos Ayres, we have already likewise spoken (see NATURE, vol. xx. p. 358).

It remains, therefore, for us only to wish the venerable author, who, for fifty years at least, has been a most energetic worker in many branches of zoology, health and strength to bring this important work to a conclusion.

Nomenclator Zoologicus. An Alphabetical list of all Generic names that have been employed by Naturalists for Recent and Fossil Animals, from the earliest Times to the close of the Year 1879. In two parts. I. Supplemental List. By Samuel H. Scudder. (Washington: Government Printing Office, 1882.)

EVERY working naturalist must be acquainted with Agassiz's "Nomenclator Zoologicus," published at Solothurn in 1846, which is, in fact, a dictionary of generic terms used in zoology. Without its valuable aid it is almost a fruitless task to endeavour to ascertain where or by what author any particular generic term has been instituted, or whether a generic term has been already used in zoology or not. Agassiz's work, in the preparation of which he was assisted by some of the best zoologists of the day, though by no means perfect in its manner of execution or free from occasional errors, answers very well for all practical purposes for genera established prior to the date of its preparation, and affords an excellent basis to work upon. It contains upwards of 32,000 entries of names of generic terms and of names of higher groups. In 1873 Graf A. v. Marschall, of Vienna, prepared and issued for the Imperial and Royal Zoological and Botanical Society of Austria, a supplementary volume, on something of the same plan. But to Marschall's "Nomenclator" no general index was attached, and, as those who have used the volume know full well, it is neither so accurate nor so complete as the work which it purports to supplement.

A new "Nomenclator Zoologicus," carrying the subject up to the present day, and correcting the errors and omissions of its two predecessors, has therefore long been a work of paramount importance to working naturalists. The question was who would undertake the ungrateful task, which was likely to confer neither fame nor fortune on the performer, and would be, above all others, long and laborious. Mr. Samuel H. Scudder of Boston, a well-known American entomologist, in response to appeals from his friends, has consented to devote his energies to the subject, and the first portion of his work is now before us.

The present part of the new Nomenclator is of a supplemental character, as is explained by Mr. Scudder in his preface, and contains "15,369 entries of genera established previous to 1880, not recorded, or erroneously given in the nomenclators of Agassiz and Marschall."

[1] Here the author takes a poetic licence.

©1882 Nature Publishing Group

The second part, which will be of still greater consequence to naturalists will be a universal index to the first part and to the previous nomenclators and will contain altogether about 80,000 references. We shall thus shortly have, it is to be hoped, a most useful general work upon this important though technical subject brought up nearly to the present date.

LETTERS TO THE EDITOR

[*The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts. No notice is taken of anonymous communications.*

[*The Editor urgently requests correspondents to keep their letters as short as possible. The pressure on his space is so great that it is impossible otherwise to ensure the appearance even of communications containing interesting and novel facts.*]

"Weather Forecasts"

HAD the Bishop of Carlisle, in his letter in NATURE (vol. xxvii. p. 4), instead of extracting from the *Times* a description of some results of the storm of October 24 last, quoted the statements as to the passage of this storm, issued in the reports of the Meteorological Office on October 24 and 25, his query concerning the failure of the weather forecasts would scarcely have needed reply.

A system of six pickets is established on our extreme western coasts, along a line which may be roughly regarded as describing the third of a circle, from Stornoway in the north-west, to Brest in the south-west. The enemy whose movements these outposts are to watch, pours in upon us a series of attacks in the form of cyclonic disturbances, by which the weather experienced in our islands is affected on 63 per cent. of our days. These circulations vary indefinitely in intensity. This element, and also their size, figure, direction, and velocity of propagation, are in great measure dependent on the distributions of atmospheric pressures and temperatures over a larger area than that occupied by our network of telegraphic stations. It will be enough to mention here that the velocity of advance of the cyclonic centres, as also of the front arcs of those exterior isobars which form closed curves, varies from zero to about 70 English miles per hour. In stormy periods like the present, the number and variability of the cyclonic circulations which attack us is extremely great, more than one per diem passing over some part of the British Isles. Now let it be remembered that our pickets sleep through the night, or that however wakeful they may be, they have, during the night hours, no means of communication with their commanding officers. How often a phalanx of the enemy will pass these outposts so as to occupy a position fairly within our area at 8 a.m., no instrumental indications having been given at 6 p.m. of the previous day—this, if treated as a question of probabilities, may be left to the Bishop of Carlisle. It is certainly obvious that such an advance, instead of being "very strange," *must* at times occur, if there be no miraculous interference in behalf of the Meteorological Office. At 8 a.m. on October 24, the centre of the disturbance referred to lay over Dorset, and was then moving to north-east at the rate of thirty-five miles per hour. Supposing the direction and velocity to have been uniform, the position occupied by the centre at 6 p.m. on the 23rd would have been about 180 miles north of Cape Finisterre, and, supposing the extent of the storm to have been also uniform, our outposts at that hour could have received no instrumental indication of the storm's progress, of a character distinct enough to justify the Meteorological Office in the issue of warnings. As a matter of fact the 6 p.m. observations telegraphed to the Office on the 23rd did show, as I think, no indications whatever of the existence of the storm.

It is obvious that the extreme velocity of the propagation of some of our severest storms is the element that especially renders it *possible* "that a storm of the first magnitude" may "come upon us unawares." As a matter of fact, the velocity of propagation on October 24 was considerably above the average. But if we refer to the charts for March 12 and 13, 1876, we find, at 8 a.m. on the former morning, a cyclone-centre occupying the precise position of that of the 24th ult., and that this disturbance moved to east-north-east with a mean velocity of 62·5 miles per hour.

There is a further risk, against which our system of telegraphy cannot protect us, viz., that of a storm centre being primarily developed within our area of observation during the hours when there is no telegraphic communication, and storms in their first stage of development are often the most dangerously rapid and intense. The telegraphic observations transmitted at 6 p.m. on October 23 and at 8 a.m. on October 24, afford no materials for deciding whether this may not have been the case in the instance under consideration, although this question can be decided from data since received. On the whole, to the minds of many students of the subject it will appear rather "strange" that the Office, *with the materials at its disposal*, does not more often fail to furnish satisfactory warnings of the more serious of our gales. It is easy to say, in view of occasional failures, "the system itself must be at fault:" it is still easier to reply, "better it!" If the country cares enough for the welfare of "fishermen and others" to do so, let it provide the necessary funds for a system of night telegrams, and if possible for a series of oceanic stations. If it does not, it must be content with things as they are.

I have been careful to speak of instrumental observations only. It is already well known that observations of the movements of the higher clouds commonly give indications of the position and advance of distant cyclonic systems. But it has hitherto been found impossible to train our observers in the difficult art of taking these observations. To the accomplishment of this task, which would greatly add to the utility of our weather-forecasts, some of us are now devoting ourselves with every prospect of success. W. CLEMENT LEY

Ashby Parva, Lutterworth, November 3

P.S.—Since the above was sent to press a storm-centre has crossed Scotland with a velocity of about 45 miles per hour. Indications of its progress were however afforded by cloud observations at a distance of more than 800 miles in advance of the centre, the velocity of propagation being supposed uniform.—W. C. L.

The Comet

YOUR engraver has missed what I thought the most important feature in the drawings which I made of the comet on the 21st inst., viz. the *shadow* beyond the end of the tail, of the length of 3 or 4 degrees, very obviously darker than the surrounding space, in which it was lost, without demarcation. This was expressed in my sketch by a shade of lampblack, very slight, to avoid exaggeration, and perhaps just sufficient to escape the engraver's notice. The comet, as seen this morning, is diminished much in size, and still more in brightness, and the present moonlight much impairs its beauty and distinctness.

C. J. B. WILLIAMS

Villa du Rocher, Cannes, France, October 30

NOTICING Major J. Herschel's remark in NATURE, vol. xxvii. p. 5, as to the difficulty he experienced in London of observing the comet, apparently owing to the moonlight, I may state that on the morning of the same Sunday to which he refers, I saw the comet very plainly when at Rothsay, Isle of Bute, Scotland. The time was between 5 and 6 a.m., and therefore before sunrise. The moon was brilliant, and the whole sky wonderfully clear, and but few stars noticeable, on account of the moonlight, nevertheless, the comet showed well, extending about 20° across the sky due south, magnetic; the nucleus was well defined, and about as bright as the stars then visible. The tail was straight, spreading outwards to the extremity. No glass was used in the observation recorded. W. J. MILLER

Glasgow, November 3

IT might be interesting to some of the readers of your paper to know that this morning, at 5 a.m., Mr. Manning, the agent here for Messrs. F. and A. Swanzy, merchants, and myself, saw a very fine comet bearing south-east, and the tail of which was as long as my first finger, from tip to last joint; its head, bearing a little to the east, was pointing into the sea, and was about the height from the sea of my four fingers held at arm's length; it was very brilliant, and we seem to have seen it to great advantage. Unfortunately we had only a field glass to view it through, and being also without instruments, were unable to take its proper altitude or bearings. We were standing on the verandah of the house at the time, which is on the beach, and about forty feet above the level of the sea.

We should be glad to know if the comet has been seen further

©1882 Nature Publishing Group